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| AGENCY NAME: | Governor's School for Science & Mathematics (GSSM) | | |
| AGENCY CODE: | H65 | SECTION: | Education - GSSM - SDE |



Fiscal Year 2013-14 Accountability Report

SUBMISSION FORM

| | |
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| <div> AGENCY MISSION </div> | <div> Mission and Values Statement </div> |
| | <div> South Carolina Governor's School for Science & Mathematics </div> |
| | <div> <p>The purpose of the South Carolina Governor's School for Science and Mathematics (GSSM) is to offer the most academically able students of this state a learning environment that strengthens their ability to think critically, stimulates the joy of learning, and fosters the excitement of discovery through scientific research.</p> <p>GSSM broadens the horizons of the mind, expands intellectual and personal growth, and cultivates the uniqueness of each student. The School builds a strong sense of community among students, faculty and staff in a residential setting.</p> <p>Emphasizing science, mathematics, and technology, the Governor's School for Science and Mathematics is an educational resource, which serves the State of South Carolina as a model for academic excellence and provides a diverse range of outreach programs and partnerships.</p> </div> |

Please identify your agency's preferred contacts for this year's accountability report.

| | <u>Name</u> | <u>Phone</u> | <u>Email</u> |
|--------------------|-------------------------------|--------------|--|
| PRIMARY CONTACT: | Mr. Ernie Boyd, VP Operations | 843-383-3906 | Boyd@gssm.k12.sc.us |
| SECONDARY CONTACT: | Dr. Murray Brockman | 843-383-3902 | Brockman@gssm.k12.sc.us |

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I have reviewed and approved the enclosed FY 2013-14 Accountability Report, which is complete and accurate to the extent of my knowledge.


AGENCY DIRECTOR
(SIGN/DATE):



(TYPE/PRINT NAME):

Dr. Murray Brockman, President

BOARD/CMSN CHAIR
(SIGN/DATE):



(TYPE/PRINT NAME):

Dr. Leroy Davis, GSSM Board Chair

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AGENCY’S DISCUSSION AND ANALYSIS

S.C. Governor’s School for Science & Mathematics:

Repeatedly recognized nationally for excellence, GSSM advances academic achievement – and economic development - throughout South Carolina by offering comprehensive residential and exemplary outreach programs for students and teachers.

Milestone Achievement: In 2013-2014 GSSM admitted its largest Junior class in the history of the institution . GSSM also hired new instructors to teach advanced courses to these advanced students – GSSM’s faculty maintains 80% with a PhD in their field, ALL have a Master’s degree.

Global Academics: Supported by private funds, GSSM continues an international exchange of high school research students with a sister high school and university in Germany and a sister high school and university in the Republic of Korea during summer of 2013.
This takes GSSM’s renowned SPRI research program worldwide...

Accountability Report Highlights:

GSSM Core Values

- *Ethics*
- *Personal responsibility and accountability*
 - *We are not a herd*
 - *We are a team of highly talented individuals striving to become better*
 - *And help each other to do so too*
- *Strong belief in evidence-based learning, questioning and contributing*
- *Love of beauty, creativity, imagination & each other*

GSSM is Strong and Growing Stronger – Students and Graduates:

- *Average SAT over five years 1365/1600*
- *Just released top ACT scores 30.3*
- *100% attend college*
- *Seniors offered over \$16 million in scholarships last year*
- *90% take graduate or professional degrees*
- *80+% major in STEM-related disciplines*

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- *About 40% make careers in-state after college*
- *Growing – nearly double*

Strong – Alumni

- *Engineers*
- *Medical Doctors*
- *Google, Microsoft, General Electric, Westinghouse, NASA, universities...*
- *MUSC: thirteen medical students, two graduate students, one faculty member*
- *Entrepreneurs*
- *Network*
- *SmartJobs*

GSSM Source of Strength – Faculty / Staff

- *Credentialed and accomplished (All have Masters, 80% have PhD’s...)*
- *Exemplify excellence and expect it from others*
- *F/S define their success by students’ success*
- *Shared goals, clear responsibilities*
 - *Learning and mastery*
 - *Growth and maturity*
 - *College and life*

GSSM Statewide Outreach: Reaching thousands of students across S.C.:

- *Privately funded*
- *Real Science across the state*
- *This summer – ten locations*
 - ✓ *Week-long camps*
 - ✓ *Engineering, biology, computer science*
 - ✓ *GSSM alumni instructors – very important*

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- *The next “BIG thing” – Accelerate Engineering (Residential too!)*

GSSM Foundations for the Future

- *Research*
 - ✓ *France, Germany, South Korea, more*
 - ✓ *Harvard, Johns Hopkins, NASA, MUSC, Clemson, USC, more*
 - ✓ *Molecular biology, medical research, engineering, computer science, more*
- *Blue Cross BlueShield Institute for Economics and Finance*
 - ✓ *Annual entrepreneurship training in Boston, Silicon Valley*
 - ✓ *SmartState Endowed chairs partnership*
- *Alumni – Internships and SmartJobs*
- *Adding crucial programs – Engineering*

Challenging Environment Creates Opportunities for GSSM

- *Slow recovery from recession, high unemployment*
- *Talent + hard work imperative*
- *Think big and go strong*
- *And go global*

Summary Benchmark highlights:

- GSSM residential **students** are 50% male, 50% female, and 30% minority. **The newly selected Class represents 27 of South Carolina's 46 counties and 71 high schools across the state.** They are selected on merit, including academic talent, interest in science and mathematics, and strong character.
- GSSM has earned **Palmetto Gold** with an “**Excellent**” rating on the SC Annual School Report Card every year.
- Averages of 58% of graduates attend **college in SC including 61% of the Class of 2014.** About **50%** of GSSM alumni **seek careers in S.C.**, working as teachers, doctors, scientists, engineers, computer scientists, and lawyers.

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- Our **nationally recognized mentored research program** for rising seniors continues to expand its international research component and produce significant results. The number of students participating in the 2013 Research Experience Scholars Program (RESP) included **3** GSSM students who conducted research at the Korean Advanced Institute of Science and Technology (KAIST) in Daejeon, South Korea and **3** GSSM students who conducted research at the German Cancer Research Center in Heidelberg, Germany. RESP is privately funded.
- Newly installed classroom technologies support GSSM's advanced and increasingly world-wide curriculum. All classrooms are equipped with a base level of technology that includes video conferencing, digital interactive whiteboards, and media players. Specialized facilities provide access to World Language media in language labs, residence halls, or while travelling the globe.
- GSSM computer science students go well beyond the basics of programming as they develop hands-on expertise with high-performance computing (HPC) systems, including the CONDOR HPC cluster (from computers donated by Google) that students built last spring. GSSM's Robotics team placed 6th in the nation.
- **GSSM alumni** continue to demonstrate excellence in both academics and leadership at the college level. Nineteen **GSSM alumni were named Goldwater Scholars** over the past 15 years at Clemson, USC, Furman, and the University of Georgia. In 2007, the **Student Government President** (Stephen Gosnell, '03) at **Clemson University** and **NC State** (Will Quick, '03) were both GSSM alums, while Charleson Bell, '03, was voted one of the top 10 seniors at Vanderbilt University and held the position of **Speaker of the Senate**. **Twelve GSSM alumni are now with the Medical University of South Carolina, in positions ranging from first year medical student to professor.**
- Even while taking a heavy & advanced load in all academic areas, over 80% of GSSM students participate in inter-scholastic sports at some level.

Academic Highlights

1. For the 2013-2014 school year, five new faculty positions were added to accommodate student growth.
2. For 2013-2014, 125 juniors were admitted, up from 108 juniors
3. Articulation agreements
 - a. Clemson
 - i. 17 GSSM courses provide 58 Clemson credit hours
 - ii. Added Calculus-based Physics, Microeconomics and Macroeconomics
 - b. College of Charleston
 - i. 17 GSSM courses provide 49 College of Charleston credit hours
 - c. University of South Carolina
 - i. 23 GSSM courses provide 52 USC credit hours
4. Course offerings

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- a. 81 courses offered as semester or year-long courses
 - b. 43 STEM courses
 - c. 16 College Board approved AP courses
 - d. 20 courses for which an AP course is a pre requisite.
- 5. New course offerings
 - a. Advanced Genetics
 - b. Fluids, Thermodynamics and Optics
 - c. AP Psychology
 - d. Contemporary Fiction, Introduction to Philosophy
 - e. African-American History
- 6. New Junior Year Seminar Series
 - a. One hour per week courses taken by all Juniors
 - b. Life and Leisure (year-long)
 - i. designed to provide juniors with the necessary skills for making the transition to residential living and to a school curriculum that is frequently intense. The course formally addresses many of the academic as well as emotional and social demands that are placed on students in their new environment. It provides them with an arena where positive life skills are encouraged and fostered.
 - c. Entrepreneurial Leadership (fall semester)
 - i. aims to help students develop the mindset and knowledge to more quickly become leading contributors in society. The seminar balances teaching very applied skills, such as personal finance and business communications, with those that are more personal and abstract, such as defining one's own definition of success.
 - d. College Guidance (spring semester)
 - i. The College Guidance seminar course is designed to teach students how to navigate both the college search and college application processes. The course will emphasize the importance of self-awareness and reflection in the process. Students will also learn how to identify college/universities that match what they are looking to gain in a collegiate experience. The tools and resources shared in the course will allow students to have a thoughtful and guided college search experience.
- 7. LaunchPad
 - a. Week-long summer program for a targeted number of rising juniors admitted to GSSM
 - b. Program helps students be more prepared to handle the rigors of the academic program at GSSM, especially in the areas of math and English
 - c. Program also includes a transitional piece to help students adjust to living in a residential setting
- 8. Standardized test statistics

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| Test | Maximum Score | Class of 2013 average | National Average 2013 | SC Average 2013 | GSSM 5-year running average |
|--------------------------------|---------------|-----------------------|-----------------------|-----------------|-----------------------------|
| SAT(Math, Reading and Writing) | 2400 | 2037 | 1498 | 1431 | 2040.0 |
| SAT(Math and Reading) | 1600 | 1365 | 1010 | 969 | 1367.4 |
| ACT | 36 | 30.3 | 20.9 | 20.4 | 30.8 |

* Class of 2014 data

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| | | FY 2012-13 Expenditures | | | | FY 2013-14 Expenditures | | | | Associated Objective(s) |
|---|--|-------------------------|------------|---------|--------------|-------------------------|------------|------------|--------------|---|
| Program/Title | Purpose | General | Other | Federal | TOTAL | General | Other | Federal | TOTAL | |
| I. Academics | Provide the highest quality instruction to S.C.'s best/most motivated High School students | \$ 3,611,474 | \$ 82,029 | | \$ 3,693,503 | \$ 3,611,474 | \$ 82,029 | | \$ 3,693,503 | G1, S1.1, O: 1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.5, 1.1.6, 1.1.7 S 1.2: O: 1.2.1, 1.2.2, 1.2.3: S 1.3: O1.3.1, 1.3.2, 1.3.3 |
| II. Life In Residence | Support the 24/7 residential campus and development in all areas outside of the classroom | \$ 2,813,590 | \$ 153,022 | | \$ 2,966,612 | \$ 2,813,590 | \$ 153,022 | | \$ 2,966,612 | G2, S 2.1, O, 2.1.1, S 2.2, O: 2.2.1, S 2.3, O: 2.3.1 & 2.3.2 |
| III. Support Admin Services | Allow functional areas to focus and achieve - Complete State Reports & Requirements | \$ 367,450 | | | \$ 367,450 | \$ 367,450 | | | \$ 367,450 | G 3 S 3.1: O: 3.1.1 , 3.1.2 |
| IV. Statewide Outreach | Raise the academic bar across the entire state, elementary through high school and improve prospects for universities and businesses in S.C. | \$ 1,606,263 | \$ 511,449 | | \$ 2,117,712 | \$ 1,606,263 | \$ 371,449 | \$ 140,000 | \$ 2,117,712 | G 4, S 4.1, O: 4.1.1 , 4.1.2 S, 4.2, O: 4.2.1, 4.2.2, 4.2.3 |
| | | | | | \$ - | | | | | \$ - |
| | | | | | \$ 8,398,777 | \$ 8,398,777 | \$ 606,500 | \$ 140,000 | \$ 9,145,277 | ** *** |
| *SDE is GSSM's fiscal agent, providing technical assistance & support | | | | | \$ - | | | | | \$ - |
| **GSSM Sought zero additional State Dollars for Fiscal Year 2013-2014 - already being funded for Growth stages. Growth distributed. | | | | | \$ - | | | | | \$ - |
| ***BCB's State Health fringe support and Salaray/fringe adjustment not shown | | | | | \$ - | | | | | \$ - |
| | | | | | \$ - | | | | | \$ - |

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Strategic Planning Template

| Type | Goal | Item # Strat | Object | Description |
|------|------|-----------------|--------|--|
| G | 1 | | | Provide the best advanced education for S.C.'s most selective students |
| S | | 1.1 | | Provide the best credentialed and most experienced teachers in all subjects |
| O | | | 1.1.1 | Hire teachers with minimum Master's degrees, PhD's preferred in their areas. |
| O | | | 1.1.2 | Maintain Excellent Rating on State School Report Card |
| O | | | 1.1.3 | Maintain low student to teacher ratio |
| O | | | 1.1.4 | Maintain and expand articulation agreements with leading in-state Universities |
| O | | | 1.1.5 | Ensure 100% of GSSM grads attend undergraduate school |
| O | | | 1.1.6 | Support and track scholarship and grant attainment by GSSM graduates |
| O | | | 1.1.7 | Track # and % of in-state and out-of-state University attendance by GSSM grads |
| S | | 1.2 | | Continually advance curriculum offerings, coordinating with Universities and Business Sector |
| O | | | 1.2.1 | Create & Privately Fund pilot Blue Cross/Blue Shield Economics & Finance Institute |
| O | | | 1.2.2 | Infuse Economics & Finance into GSSM curriculum offerings, move to sustainable model |
| O | | | 1.2.3 | Create Engineering program for residential academics at GSSM |
| O | | | | |
| S | | 1.3 | | Provide a safe and supportive teaching environment with technology |
| O | | | 1.3.1 | Schedule campus teaching spaces with zero teaching downtime for facility repair |
| O | | | 1.3.2 | Upgrade IT networks and in-classroom/lab IT to support instruction |
| O | | | 1.3.3 | Implement Public Safety department, review, revise and practice public safety drills (fire, Tornado, Armed Intruder Lockdown) |
| G | 2 | | | Operate a residential campus supportive of students in activities, character development and safety |
| S | | 2.1 | | Conduct Athletic Programs appropriate to an academically-focused residential high school |
| O | | | 2.1.1 | Create athletic teams supportive of student interests and abilities |
| S | | 2.2 | | Create arts and music programs supporting students interests and talents |
| O | | | 2.2.1 | Hire specialized art and music instructors to foster student development in art & music |
| S | | 2.3 | | Ensure physical and mental health of students |
| O | | | 2.3.1 | Provide mental health professional at doctoral level to assess student body via individuals at improving emotional quotient awareness |
| O | | | 2.3.2 | Provide extensive qualified nursing services to include medication management |
| G | 3 | | | Focus Support and Admin services on cost containment and freeing-up instruction, Outreach & Student Development Functionality |
| S | | 3.1 | | Minimize support & admin functions - no increase during Growth phases, distributing to functional areas |
| O | | | 3.1.1 | Support functional areas by creating minimally necessary reporting and administrative tasks - mainly self-created tasks. |
| O | | | 3.1.1 | Implement Growth plans in phases per outlined excellence benchmarks (teacher qualifications, ratios, etc.) |
| G | 4 | | | Expand Academic opportunities and achievement statewide via GSSM Outreach Programs, focus on private funding |
| S | | 4.1 | | Maintain and expand GSSM's advanced research program for residential students through growth - via University Partners. |
| O | | | 4.1.1 | While increasing student body, provide qualify research placements at universities or industrial sites. |
| O | | | 4.1.2. | Expand International Research Opportunities and placements for GSSM students, learn from exchanges |
| S | | 4.2 | | Expand quality GSSM Academic Outreach programs for more students of different grades, in more locations throughout South Carolina. |
| O | | | 4.2.1 | Increase programs targeted to specific age groups, sites & availability and participation in Statewide Outreach. Increase Academic achievement |

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**Fiscal Year 2013-14
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Strategic Planning Template

[illegible]

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Performance Measurement Template

| Item | Performance Measure | Last Value | Current Value | Target Value | Time Applicable | Data Source and Availability | Reporting Freq. | Calculation Method | Associated Objective(s) |
|------|---|--------------|---------------------------------------|---|--------------------------------|------------------------------|-----------------|--|--|
| 1 | Growth in Student Body | 185 | 225 | 288 | 3 years | GSSM Admissions | Annual | Admissions - Count | G1: 1.1.3, 1.1.4, 1.1.5, 1.1.6: G2, 2.1, 2.2, 2.2.1, 2.3, 2.3.1, 2.3.2 |
| 2 | Growth in Excellent Faculty | 21 | 27 | 31 | 3 years | Staffing | Annual | Count | G1: 1.1.3, 1.1.4, 1.1.5, 1.1.6, G2, 2.1, 2.2, 2.2.1, 2.3, 2.3.1, 2.3.2, 3.1, 3.1.1, 3.1.1 |
| 3 | Maintain % of Faculty with Masters | 100% | 100% | 100% | Annual | Staffing | Annual | Count | S 1.1: O1.1.1, 1.1.4, 1.1.7 |
| 4 | Maintain % of Faculty with PhD | 80% | 80% | 80% | Annual | Staffing | Annual | Count | S 1.1: O1.1.1, 1.1.4, 1.1.7 |
| 5 | Maintain "EXCELLENT" Rating on School Report Card | Excellent | Excellent | Excellent | Annual | S.C. School Report Card | Annual | Various Benchmarks | S1.2: O1.3.2, G3, S3.1, 3.1.1, 3.1.1 |
| 6 | Major Curriculum Addition | Econ-Finance | Econ-Finance & Accelerate Engineering | Various, depending on University and/or Business Demand | Major addition every 2-3 years | GSSM Academics | Annual | Maintain and track results, | O1: S1.1, 1.1.4, 1.1.5, 1.1.6, 1.1.7 |
| | Articulation Agreements with Universities | 52 | 57 | Various, seek to maximize credits for grads | two years | GSSM Academic Profile | Annual | Maintain and track results, | G1: 1.1.3, 1.1.4, 1.1.5, 1.1.6, G2, 2.1, 2.2, 2.2.1, 2.3, 2.3.1, 2.3.2, 3.1, 3.1.1, 3.1.1 |
| 7 | Amount of Scholarships/grants | \$12,028,907 | \$16,461,691 | Maximize | Annual | College Counseling | Annual | Naviance Reporting System, Student reports | S1.3, G4.4.1.1, 4.1.2 |
| 8 | % of GSSM Grads to Undergraduate College | 100% | 100% | 100% | Annual | College Counseling | Annual | Report | 1.1.2, 1.1.6, |
| | New Junior Year Seminar Series | 0 | 1 | Maintain | two years | Campus Life | Annual | Student Development | G2: S2.3, 2.3.1, 2.3.2, 1.1.2, 1.1.6 |
| 9 | # of Outreach Summer GSSM Participants | 445 | 1295 | Capacity, maintain quality | Annual | GSSM Admissions | Annual | Admissions - Count | G4: S4.2, O4.2.1, 4.2.2, 4.2.3 |
| 10 | # of Outreach Sites Provided | 8 | 14 | Reasonable Growth w/quality maintained | Annual | GSSM Outreach | Annual | Admissions | G4: S4.2, O4.2.1, 4.2.2, 4.2.3 |
| 11 | Research Scientist as Mentors | 86 | 96 | Match w/growth | Annual | GSSM Outreach | Annual | GSSM Outreach/Universities | G1: 1.1.3, 1.1.4, 1.1.5, 1.1.6, G2, 2.1, 2.2, 2.2.1, 2.3, 2.3.1, 2.3.2: G4: S4.2, O4.2.1, 4.2.2, 4.2.3 |
| 12 | % of Grads attending In-State Universities | 54% | 61% | 50% + | Annual | College counseling | Annual | Admissions | 1.1.4, 4.1, r.1.1 |